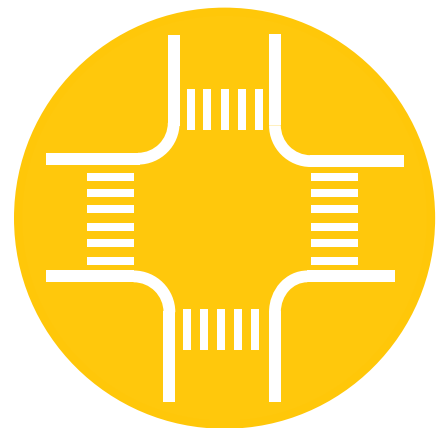


**Vanderburgh County
Burkhardt Road + US 41 TIF Districts**



BICYCLE + PEDESTRIAN SYSTEM PLAN

Prepared by:
Evansville Metropolitan Planning Organization

acknowledgements

The Evansville Metropolitan Planning Organization wishes to acknowledge and thank the TIF Districts Bicycle and Pedestrian Plan Study Advisory Committee for its efforts in guiding the development of the Plan. The assistance of the Committee, in combination with input from other various organizations, City and County departments, was critical in developing a plan to address the needs of bicyclists and pedestrians throughout these TIF Districts within Vanderburgh County and Evansville.

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The Evansville MPO especially acknowledges the past and present Vanderburgh County Commissioners for their support of bicycling and pedestrian facilities throughout the county and their continued interest in building upon these facilities for Vanderburgh County residents.

table of contents

chapter 1	introduction	1
1.	Purpose	1
2.	Planning Process	2
3.	Study Area	2
4.	Role of Bike and Pedestrian Facilities in Vanderburgh County	2
chapter 2	planning process	5
1.	Community Involvement	5
a.	Study Advisory Committee	6
b.	Public Workshop	6
2.	Types of Facilities Considered.....	6
a.	Bike Lanes	6
b.	Marked Shared Lanes.....	6
c.	Bike Routes.....	7
d.	Multi-Use Path	7
3.	Destination Points	7
a.	Burkhardt Road TIF District	7
b.	US 41 TIF District.....	9
4.	Analysis of proposed routes.....	11

chapter **3** existing conditions13

- 1. Existing Bike and Pedestrian Routes in the region13
 - a. Vanderburgh County13
 - b. City of Evansville.....15
 - c. Warrick County15
- 2. Existing Bike and Pedestrian Routes in TIF Districts.....19
 - a. Bike Facilities.....19
 - b. Sidewalks.....19

chapter **4** recommendations23

- 1. BURKHARDT ROAD TIF DISTRICT23
 - a. Burkhardt Road23
 - b. Lynch Road25
 - c. North Green River Road26
 - d. Millersburg Road27
 - e. Heckel Road.....28
 - f. Vogel Road29
 - g. Virginia Street29
 - h. Columbia Street*30
 - i. Circle Front Drive/East Division Street/Crosslake Drive Loop.....31
 - j. East Indiana Street.....31
 - k. Cross Pointe Boulevard32
 - l. Oak Grove Road33
- 2. Burkhardt Road TIF District Intersection Improvements.....34
 - a. Burkhardt Road/East Lloyd Commons and Lloyd Crossing Shopping Complexes.....34
 - b. Burkhardt Road/Vogel Road Intersection.....35
 - c. Burkhardt Road/Morgan Avenue Intersection35
 - d. Burkhardt Road/Old Boonville Highway Intersection.....36
 - e. Lynch Road/Burkhardt Road Intersection37
 - f. Lynch Road/Green River Road Intersection37
 - g. Green River Road/Heckel Road Intersection38
- 3. US 41 TIF DISTRICT39
 - a. Boonville New Harmony Road*39
 - b. Darmstadt Road/Old Princeton Road41
 - c. Baseline Road.....41
 - d. Old State Road42
 - e. Peck Road*42
 - f. North Junior High and High School Connection43
 - g. Scott Elementary School Connection43
 - h. Korff Road.....44

4. US 41 TIF District Intersection Improvements44

 a. US 41/Boonville New Harmony Road Intersection..... 44

 b. US 41/Baseline Road Intersection..... 44

chapter **5** phasing and implementation45

1. Burkhardt Road TIF District.....45

2. US 41 TIF District49

3. Funding.....49

figures

Figure 1: TIF District Locations..... 3

Figure 2: Burkhardt Road TIF District Destinations 8

Figure 3: US 41 TIF District Destinations 10

Figure 4: Burdette Park Discovery Routes..... 14

Figure 5: Evansville’s Existing Bicycling Facilities..... 16

Figure 6: Blue Grass Fish and Wildlife Area Routes 17

Figure 7: Newburgh’s Rivertown Trail 18

Figure 7: Burkhardt Road TIF District Sidewalks..... 20

Figure 8: Burkhardt Road TIF District Recommended Routes 22

Figure 9: US 41 TIF District Recommended Routes 40

Figure 10: Burkhardt Road TIF District Project Phasing..... 47

Figure 11: US 41 TIF District Project Phasing 48

tables

Table 1: Analysis Factors 11

Table 2: Burkhardt Road Improvement Phasing 45

Table 3: US 41 Improvement Phasing..... 49

1

introduction

1. PURPOSE

Vanderburgh County commissioned the Evansville Metropolitan Planning Organization to develop this Bicycle and Pedestrian System Plan for the Burkhardt Road and US 41 Tax Increment Financing (TIF) Districts. Biking and walking is becoming a more desired mode of transportation, as well as a recreational hobby, due to the health benefits of a more active lifestyle. The purpose of this plan is to help make biking and walking a more safe and realistic mode of transportation and recreation for Vanderburgh County residents.

While automobiles will undoubtedly continue to be the main mode of transportation in the region, improving conditions for bicyclists and pedestrians is important for many reasons:

- To improve the safety of those who currently bicycle and/or walk. Many residents currently rely on bicycling and/or walking to get to their job, the store, the bus stop or wherever else they need to go.
- To improve accessibility for all residents. In particular, older residents, children, citizens with low incomes and citizens with functional disabilities need safe and affordable alternatives to driving. This need will increase over the next few decades as the Baby Boom generation enters retirement age.
- To achieve more efficient use of the existing transportation system. Bicyclists and pedestrians require less space than vehicles require, meaning that more travelers can be accommodated in less space, with less auto congestion. In addition, bicycling and walking reduce the amount of wear and tear on roads. Greater use of these modes of travel can help delay the need for major roadway repair and new construction.
- To enhance the region's quality of life. Bicycling and walking encourage interaction between the residents, promote a sense of community and add recreational value.

- To encourage more active and healthier residents. Walking and bicycling are excellent physical activities, and their use helps improve public health.
- To help promote better local air quality. Unlike auto travel, bicycling and walking do not produce greenhouse gases and other harmful emissions.

2. PLANNING PROCESS

The TIF Districts Bicycle and Pedestrian Plan was a five-step process that identified potential bicycle and pedestrian network improvements. The five steps taken throughout the planning process include:

- 1) Collect existing conditions data for each TIF District;
- 2) Meet with the Study Advisory Committee (SAC) to receive initial input;
- 3) Analyze existing conditions for best alternatives;
- 4) Present draft routes to the public for review and comment;
- 5) Develop recommendations.

The Study Advisory Committee (SAC) is composed of experts in the engineering, planning and bicycle community, for the purpose of providing initial ideas and comments, review of technical data, review of draft plans, and a review of the final plan prior to release to public officials. A public workshop was held to give the interested public the opportunity to review the proposed routes and make suggestions.

3. STUDY AREA

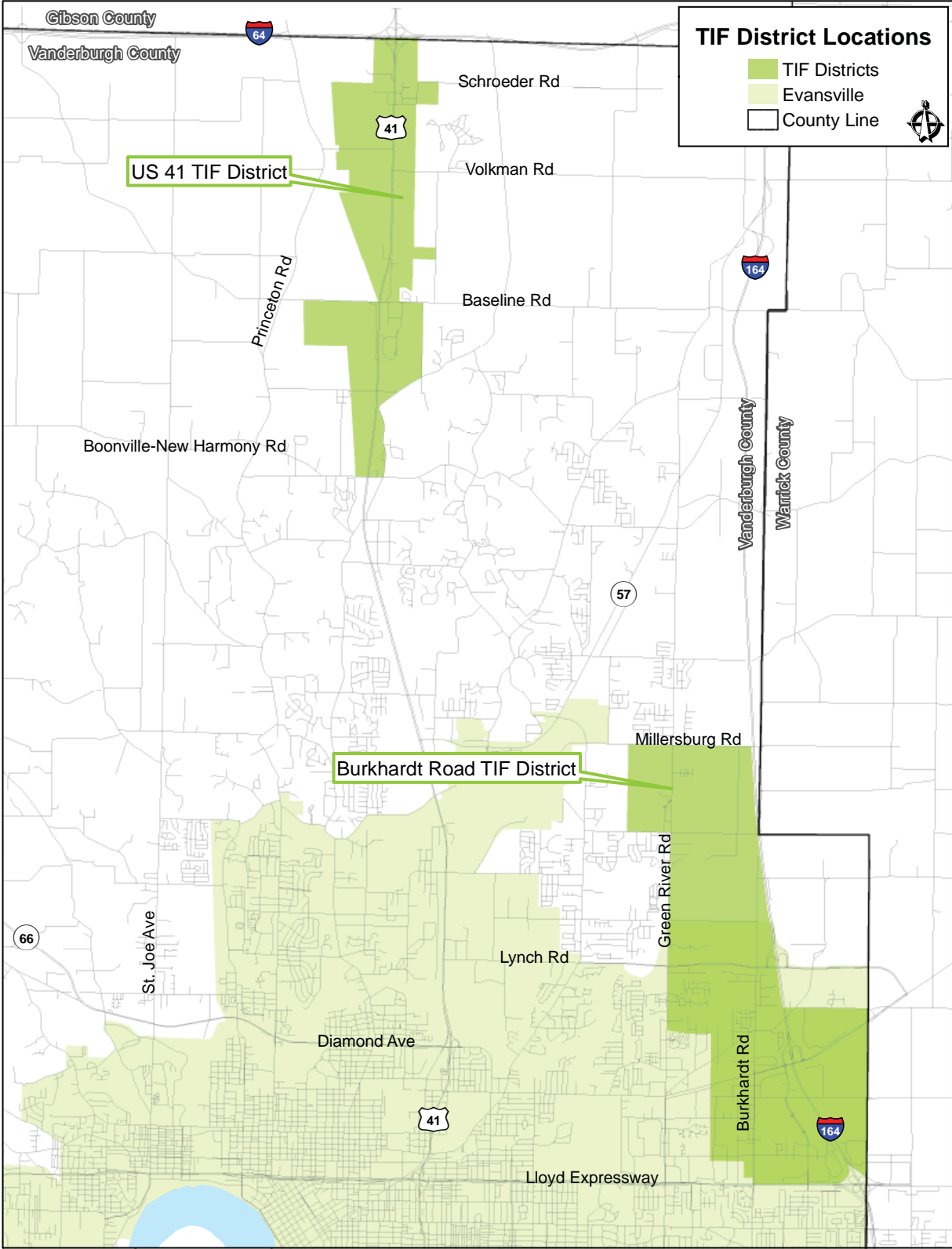
This plan covers two separate study areas: the Burkhardt Road TIF District in Evansville-Vanderburgh County, and the US Highway 41 TIF District in Vanderburgh County. The Burkhardt Road TIF District is located on Evansville's eastside and extends five miles from the Lloyd Expressway (southern boundary) to Millersburg Road (northern boundary). The US Highway 41 TIF District extends five miles from Boonville-New Harmony Road (southern boundary) to I-64 (northern boundary).

4. ROLE OF BIKE AND PEDESTRIAN FACILITIES IN VANDERBURGH COUNTY

In recent years, Vanderburgh County has been receptive to the increase of cyclists and people walking to and from their destinations. Several facilities have been added to the bicycle and pedestrian network within the last several years. In 2006, more than 32 miles of recreational bike routes were designated in Union Township to provide the advanced cyclist with long, safe routes. These routes are called the Burdette Park Discovery Trail. In 2007 and 2008, several dozen yellow, diamond-shaped "share the road" signs were placed in Vanderburgh County. These signs alert motorists to the possibility of encountering cyclists.

In 2006, Vanderburgh County began construction on its first multi-use separated path. The path, called the Burdette Park/USI Nature Trail, will extend from the University of Southern Indiana to Burdette Park. The trail will also connect with the Burdette Park Discovery Trail bike routes. The trail is expected to be completed in late spring of 2012.

Figure 1: TIF District Locations



Bike Route - Franklin Street



The efforts that Vanderburgh County has made recently compliment the efforts of the City of Evansville. Evansville took steps in the 1970s to incorporate more bikeways within the transportation system, with a push from interested citizens and cyclists. In 1978, Evansville's first bike plan, A *Bikeway Master Plan*, was developed and adopted by the City, but only two small multi-use trail projects were implemented from the plan.

More recently, the Evansville Metropolitan Planning Organization (EMPO) completed the *Regional Bicycle and Pedestrian Plan* in 2000. This plan served as an update to the 1978 *Bikeway Master Plan* and included a detailed listing of recommendations for new bike facilities based on the existing inventory, as well as education, encouragement and enforcement activities.

Pigeon Creek Greenway Passage - Lamasco Park



Several of the bikeway recommendations have been implemented since the completion of the plan in 2000. This includes about 20 miles of urban signed bike routes that connect the near westside, downtown, eastside and northeast sides of Evansville. Evansville's first bike lane was completed in 2011 on Oak Hill Road from Virginia Street/US Highway 41 to Morgan Avenue, with plans to continue to Lynch Road.

As of 2012, slightly over six miles of the Pigeon Creek Greenway Passage were complete. The Greenway currently extends from Sunrise Park on the riverfront to the Heidelbach Canoe Launch and Trailhead.

2 plan process

The TIF Districts Bicycle and Pedestrian Plan includes recommended bicycle routes and intersection improvements that will help make these areas of Vanderburgh County more accessible by bicycle or foot. To determine which routes and improvements are needed, the major destination points within each TIF district were first identified. Routes connecting these points were identified, and then studied to determine their feasibility. The following five-step process was used to develop the recommended improvements:

- 1) Collect existing conditions data for each TIF District;
- 2) Meet with the SAC to receive initial input;
- 3) Analyze existing conditions for best alternatives;
- 4) Present draft routes to the public for review and comments;
- 5) Develop recommendations.

1. COMMUNITY INVOLVEMENT

It is always important to seek input from the community members when planning for future improvements. Receiving comments and ideas from the community helps to ensure that the improvements will serve the needs of the users. Input from a Study Advisory Committee (SAC) and comments and additional suggestions from the public were obtained for the TIF Districts Bicycle and Pedestrian Plan.

SAC meeting



A. STUDY ADVISORY COMMITTEE

The Study Advisory Committee (SAC) was composed of experts in the engineering, planning and bicycle community. Their role in the planning process was to provide initial ideas, then to review the plan throughout the process and the final plan before it is reviewed by elected officials.

The project was introduced to the SAC members at the first meeting on June 28th, 2011. The committee was lead through visioning exercises to help get initial ideas about future bicycle and pedestrian facilities. These exercises stressed the importance of connections and destinations. The committee identified major destination points and potential connections between them.

B. PUBLIC WORKSHOP

A public workshop was held on October 28th, 2011, to present the identified destination points and draft network of connections. All interested community members were encouraged to provide feedback on these routes and make other recommendations that were not included within the draft network. Twenty-one people attended this workshop.

Typical Bike Lane

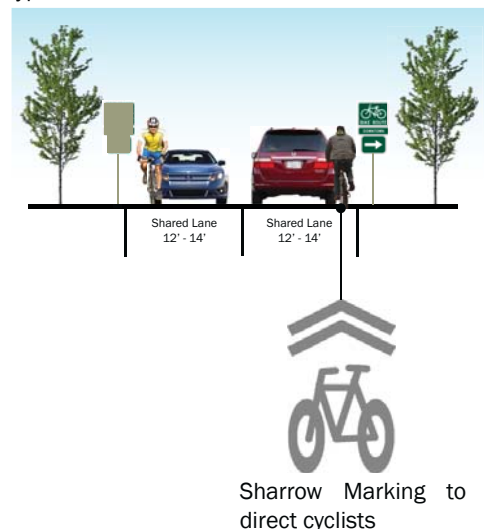


2. TYPES OF FACILITIES CONSIDERED

A. BIKE LANES

Bike lanes are a dedicated space on each side of the street reserved for bicycle use and typically consist of striping, signage and pavement markings. Usually bike lanes are established on streets that have a moderate to heavy traffic flow. Having the separated marked lane for bicyclists on busier roads provides the cyclist their own space, making it safer for them, as well as for the vehicles. Evansville recently striped its first bike lane on Oak Hill Road (between US 41 and Morgan Avenue.)

Typical Marked Shared Lane



B. MARKED SHARED LANES

A marked shared lane is used by both bikes and vehicles. These lanes are usually established on streets with moderate traffic that are not suitable for bike lanes due to space or access issues. Special pavement markings (shared lane markings, or "sharrows") direct the bicyclist to ride away from parked cars or near the center of narrow lanes. These markings also encourage cars to share the lane with the bicyclist. With the exception of the bike lanes on Oak Hill Road, all other bike routes currently in Evansville's city limits are marked shared lanes.

C. BIKE ROUTES

Bike routes are also shared by both bikes and vehicles, but unlike a marked shared lane, a bike route does not have a pavement marking. Many bike routes have signs showing the direction and distance to destinations (i.e. Downtown, the Riverfront). Bike routes are usually on streets that are not suitable for bike lanes but are relatively good for biking. The Burdette Park Discovery Trail routes, located in Union Township of Vanderburgh County, are an example of a bike route. These routes have signs marking distances, without having a pavement marking on the road.

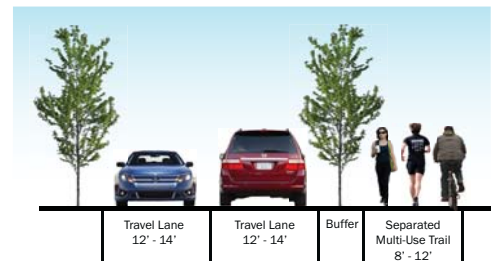
Typical Bike Route - no sharrow



D. MULTI-USE PATH

Multi-use paths are paved paths that are separated from the road and can be used by bicyclists, walkers, runners and in-line skaters. The Pigeon Creek Greenway Passage is a separated multi-use path that gets a lot of use throughout the community.

Separated Multi-Use Path



3. DESTINATION POINTS

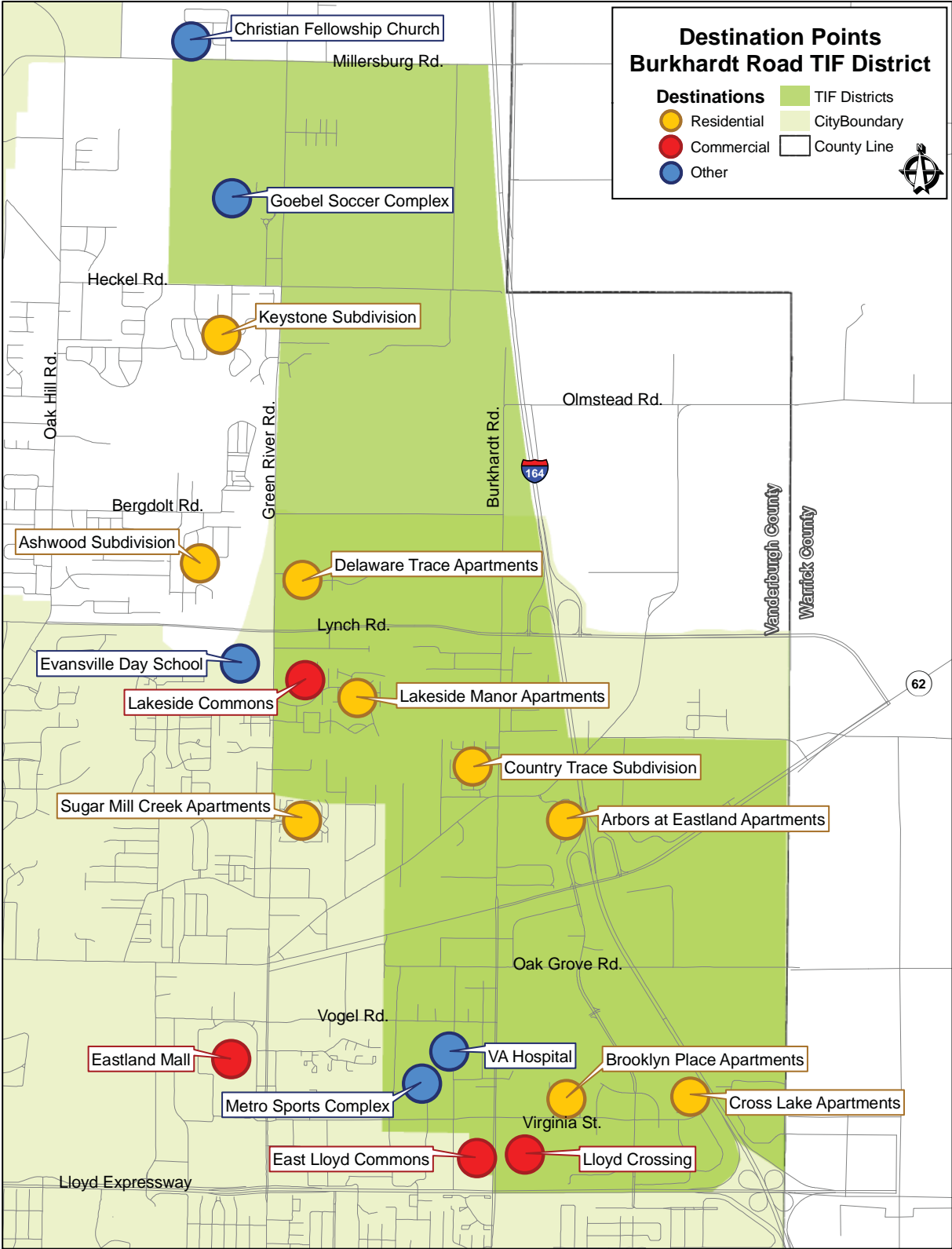
The SAC went through an exercise to identify destinations within each TIF District during their first meeting. These destinations include commercial areas, residential neighborhoods/apartment complexes, employment centers, recreation areas and worship centers. Potential routes can be identified by locating the places that people are most likely to travel to and from. Connecting these destination points to one another creates a network that is easy and practical to its users.

A. BURKHARDT ROAD TIF DISTRICT

The commercial destinations that were identified as the most significant in the Burkhardt Road TIF District were:

- Lloyd Crossing (Walmart)
- East Lloyd Commons (Best Buy)
- Lakeside Commons (Schnuck's complex on North Green River Road)
- Eastland Mall (outside of TIF District boundary)

Figure 2: Burkhardt Road TIF District Destinations



The residential areas that were identified in this TIF District are:

- Brooklyn Place Apartments
- Cross Lake Apartments
- Arbors at Eastland Apartments
- Country Trace Subdivision
- Lakeside Manor Apartments
- Delaware Trace Apartments
- Ashwood Subdivision
- Keystone Subdivision

The recreational areas that were identified in and around the TIF District include:

- Metro Sports Complex
- Goebel Soccer Complex
- Blue Grass Fish and Wildlife Area (outside of TIF District boundary)

Several civic uses (schools, churches, medical offices) were also identified and include:

- The Veterans Administration Hospital
- Evansville Day School (outside of TIF District boundary)
- Christian Fellowship Church

B. US 41 TIF DISTRICT

Commercial uses near the US 41 TIF District include:

- Northfield Shopping Center
- Grant Hills South and Grant Hills Commercial Center

Residential neighborhoods near the US 41 TIF District include:

- Kingsmont Subdivision
- Cambridge Village

Other uses in or near the US 41 TIF District include:

- The Vanderburgh County 4-H Center (just outside of TIF District boundary)
- Centenary United Methodist Church
- North Junior High and High School
- Scott Elementary School
- Cambridge Golf Course

Figure 3: US 41 TIF District Destinations



4. ANALYSIS OF PROPOSED ROUTES

Potential bicycle routes and pedestrian connections were identified once the destination points were located. An analysis of each route was conducted to determine if the route was feasible. The American Association of State Highway and Transportation Officials (AASHTO) and the U.S. Department of Transportation Federal Highway Administration (FHWA) have documented guidelines for the development of bicycle and pedestrian facilities. These manuals provide dimensional guidelines for facilities, as well as information regarding signs and pavement markings and their placement on the roadway. While studying the proposed routes, the following factors were considered:

- Roadway width
- Average Daily Traffic Volume (AADT)
- Surrounding land uses
- Traffic speeds (when necessary)

All of the factors and others were considered when determining the feasibility of a bike facility on a roadway. These factors also helped determine the type of facility on selected roadways. The following table shows the roadway space needed for treatments, as well as the suggested speeds of vehicles.

Table 1: Analysis Factors

	Required Roadway Space	Average Vehicle Speeds
Bike Lane	4' - 6' dedicated space	35-45
Sharrow	12' - 14' travel lane	25-35
Bike Route	12' - 14' travel lane	25-35
Separated Path	8' - 12' paved path	N/A

3

existing conditions

1. EXISTING BIKE AND PEDESTRIAN ROUTES IN THE REGION

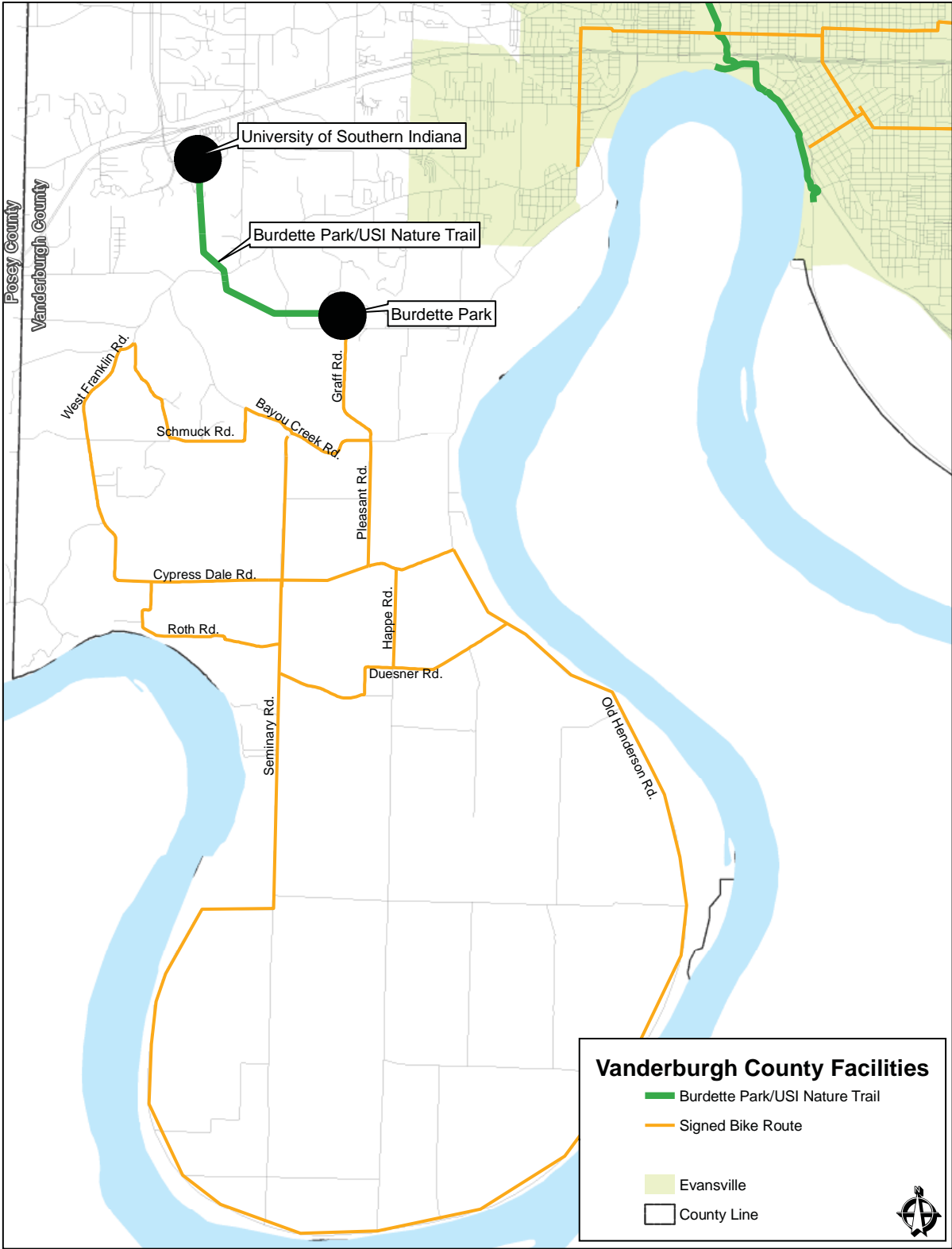
Vanderburgh County, as well as the City of Evansville, Warrick County, and Town of Newburgh, have made great efforts in recent years to build a bicycle and pedestrian network. These communities have provided greenways, bike routes and lanes, and have increased the amount of sidewalks in order to encourage people to become more active. Connecting these networks on a regional level can be achieved. Connecting downtown Evansville and Newburgh has been discussed, using Angel Mounds State Historic Site as the connection point. This plan will look at routes within Vanderburgh County and how they can be connected to Warrick County to create a broader regional network.

A. VANDERBURGH COUNTY

More than 32 miles of roads in Union Township were designated as bicycle routes (four connecting routes) during the summer of 2006. The bicycle routes, called the Burdette Park Discovery Trail, connect to Burdette Park, where a trailhead with information, bicycle parking, and showers are available for cyclists' use. Route Four also has a trailhead. These routes are Vanderburgh County's first comprehensive facility for recreational road cyclists in the region.

During 2007 and 2008 several dozen "share the road" signs were placed in Vanderburgh County. These signs consist of a yellow, diamond-shaped bicycle warning sign and a rectangular placard (mounted below) stating share the road. The intent of these signs is to alert motorists to the possibility of encountering slower-moving cyclists. Rural roads are preferred by recreational cyclists for extended rides without frequent required stops. These signs have helped raise awareness to motorists of cyclists' use of rural roads.

Figure 4: Burdette Park Discovery Routes



In 2006, Vanderburgh County began construction on a multi-use path to connect the University of Southern Indiana to Burdette Park. This path, called the Burdette Park/USI Nature trail, links to the four Burdette Park Discovery Trail bike routes. Trailheads are located at both USI and Burdette Park, with an additional trailhead at Broadway Avenue. This trailhead provides parking and seating. The path will be completed in the late spring of 2012.

Vanderburgh County also maintains a portion of the bike routes within the Blue Grass Fish and Wildlife Area (see Warrick County section below). County Line Road between Boonville New Harmony Road and Baseline Road are maintained by Vanderburgh County, with the rest of the routes being maintained by Warrick County.

B. CITY OF EVANSVILLE

Since the adoption of the Regional Bicycle and Pedestrian Plan in 2000, the City of Evansville has worked to implement several of the proposed bicycle and pedestrian improvements, with the overall goal to achieve a city-wide bike and pedestrian network. As of 2011, the City had implemented around 20+ miles of urban signed bike routes. These routes connect the westside, downtown, eastside, and some neighborhoods to the north and south. These bike routes include:

- An eastside-to-downtown route along Lincoln Avenue from the Vanderburgh/Warrick County line to Rotherwood Avenue, and along Bellemeade Avenue from Rotherwood to SE Eighth Street downtown. Much of the Lincoln Avenue section is due to the road diet that reduced the travel lanes from four to two with a center turn lane.
- A westside-crosstown route from Howell Park to West Franklin Street, where the route links to the Greenway, and across town to Oak Hill Road using Michigan and Virginia Streets.
- A north-south route along Oak Hill Road, from Lynch Road to US 41, which will link to a planned segment of the Greenway along US 41. This bikeway is Evansville's first dedicated bike lane (and first complete streets project), and is currently complete from US 41 to just north of Morgan Avenue. The next phase will complete the dedicated bike lane up to Lynch Road.
- A downtown bike route on Martin Luther King, Jr. Boulevard (from Mary Street to Cherry Street), with spurs on Cherry Street leading south to the riverfront and Greenway, and north to the Bellemeade Avenue route and the downtown Library
- A bike route on East Franklin Street and Michigan Street, linking Oak Hill Road and Wesselman Park.

The Pigeon Creek Greenway Passage has been under development since the early 1990s by the City of Evansville Parks Department. It is a linear park, or pathway, that provides a safe place for walking, jogging, bicycling, roller-skating, and other activities. The vision for the Greenway is to create a 42-mile pathway that encircles Evansville and connects to Newburgh and possibly other communities. As of 2012, just over 6 miles of Greenway have been completed. The Greenway connects downtown to the Heidelberg Canoe Launch and Trailhead. The Greenway links attractions such as the Evansville Museum, Pagoda and Visitor's Center, Casino Aztar, the Shirley James Gateway Plaza, Lamasco Park, and Kleymeyer and Garvin Parks. A spur of the Greenway breaks away from the Shirley James Gateway Plaza to the historic Marchand Bridge Overlook.

C. WARRICK COUNTY

Much like Vanderburgh County, Warrick County has been active in creating bicycling and pedestrian facilities. Warrick County also installed "share the road" signs in 2007 and 2008. In 2011, Warrick County designated over

Figure 5: Evansville's Existing Bicycling Facilities



Figure 6: Blue Grass Fish and Wildlife Area Routes

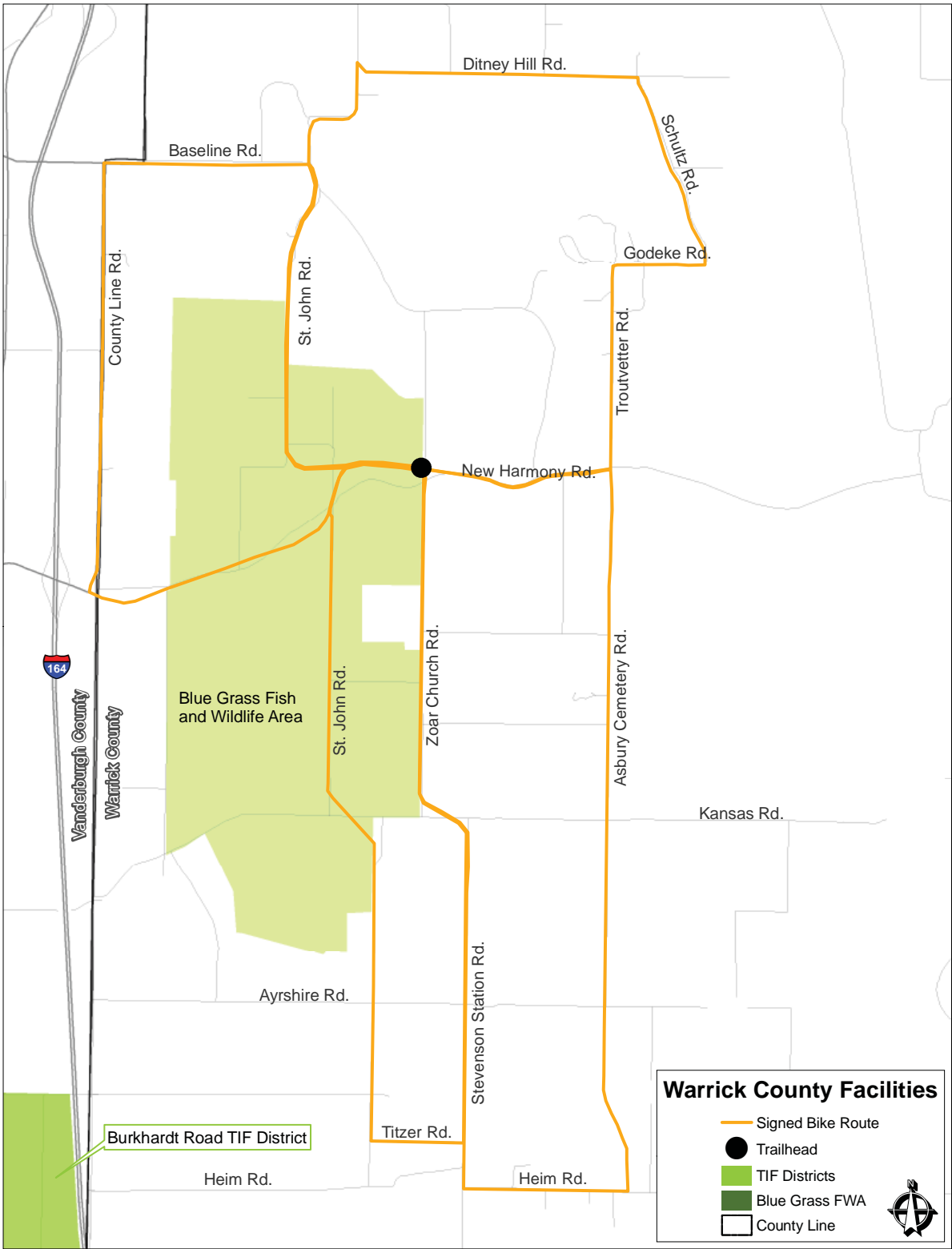


Figure 7: Newburgh’s Rivertown Trail



30 miles of rural roadways as bikes routes. These routes are located around the Bluegrass Fish and Wildlife Area. Similar to the Burdette Discovery Trail, these routes are composed of four connected routes with a trailhead located at New Harmony Road and Zoar Church Road. A route map, parking and seating is provided at this trailhead.

Newburgh has recently completed close to three miles of their Rivertown Trail. Currently, the Rivertown trail extends from a trailhead at SR 662 and Yorkshire Road, just west of downtown, to the Newburgh Lock and Dam Overlook Park. It is currently envisioned that the Rivertown Trail will connect to Angel Mounds State Historic Site, while facilities in Vanderburgh County do the same. This will create a connection between downtown Evansville and downtown Newburgh.

2. EXISTING BIKE AND PEDESTRIAN ROUTES IN TIF DISTRICTS

A. BIKE FACILITIES

Currently, there are no on-street bike facilities or separated paths in either TIF District. The Oak Hill Road route and Lincoln Avenue route are the current routes that come closest to the TIF District. Connecting the existing bike routes with the proposed routes in this plan is desired in the future.

B. SIDEWALKS

Currently, there are very few sidewalks in the Burkhardt Road TIF District. These sidewalks are primarily in the southeast portion of the Burkhardt Road TIF District, however, these sidewalks are in segments. Portions of the following roads have sidewalks:

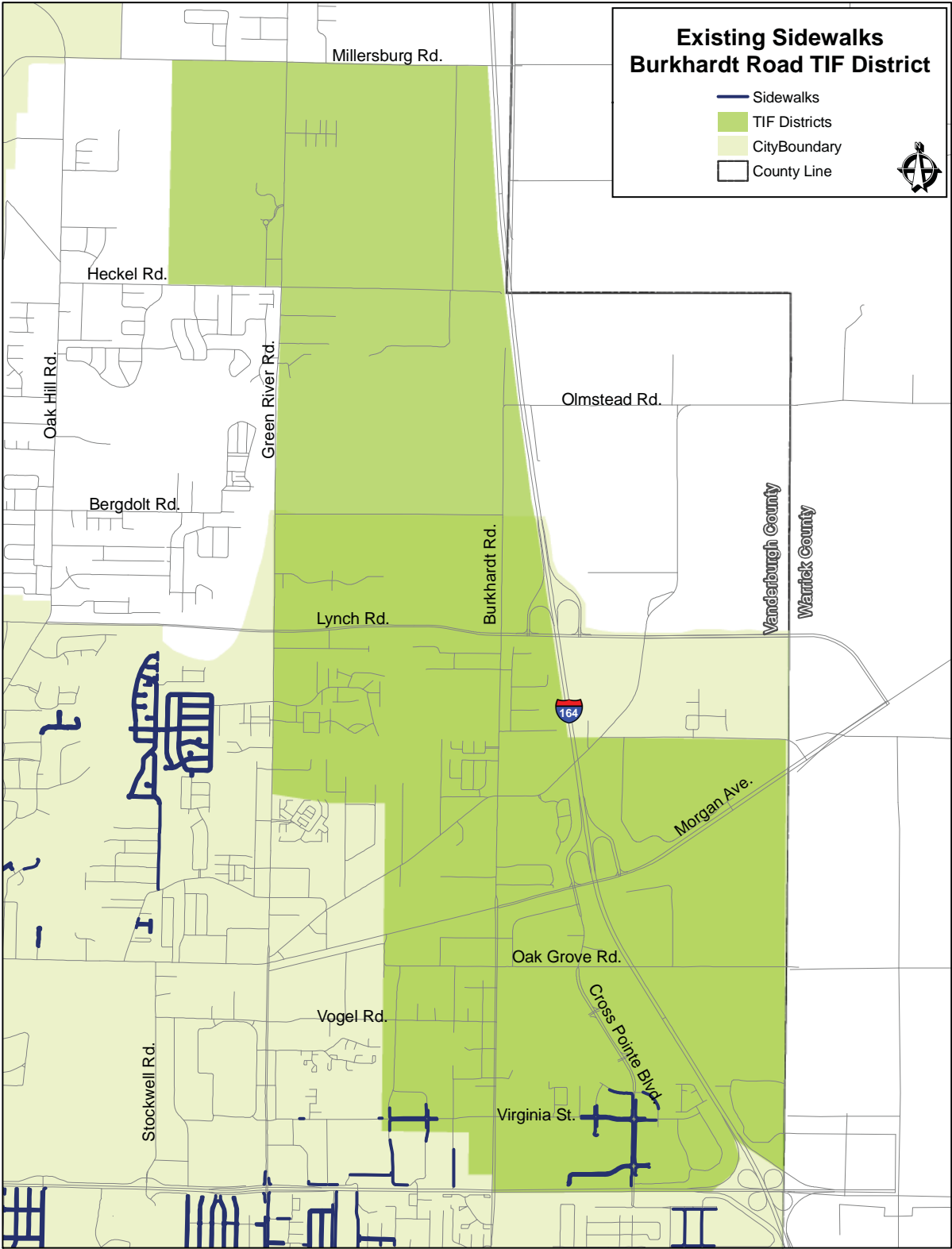
- Cross Pointe Boulevard
- East Indiana Street
- Virginia Street
- Bantee Wes Court
- East Columbia Street

There are also a few portions of sidewalks in the southwest portion of this district and are mainly in front of newer developments along

- Virginia Street
- Metro Avenue

There are no sidewalks currently in or around the US 41 TIF District.

Figure 7: Burkhardt Road TIF District Sidewalks



4

recommendations

A network of proposed bicycle and pedestrian routes has been developed by incorporating ideas from the Study Advisory Committee and the public meetings. Locating major destination points (commercial centers, residential areas, schools, and parks) was one of the key components in determining the proposed network. By linking these key destinations with bike lanes or routes, sidewalks or separate trails, people will have easier access to these heavily traveled areas. This chapter breaks down the proposed network by route segments. (Additional and more in-depth analysis and design work should be completed as this plan is implemented.)

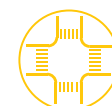
These proposed routes would allow for residents and users to safely travel between home, work, shopping and recreational areas on foot or bicycle. There are several types of treatments that are recommended within the proposed network. The type of treatment varies between routes and is based on several factors, including roadway width, traffic volume and speed, and targeted users. The following section breaks up the proposed routes and improvements (by TIF District) by route segments and describes the recommended treatments in greater detail. The recommended treatments could include the addition of sidewalks, dedicated bike lanes, signed bike routes, intersection crossing improvements, the construction of a separated multi-use path, or a combination of these treatments.



Recommended Bike Facility

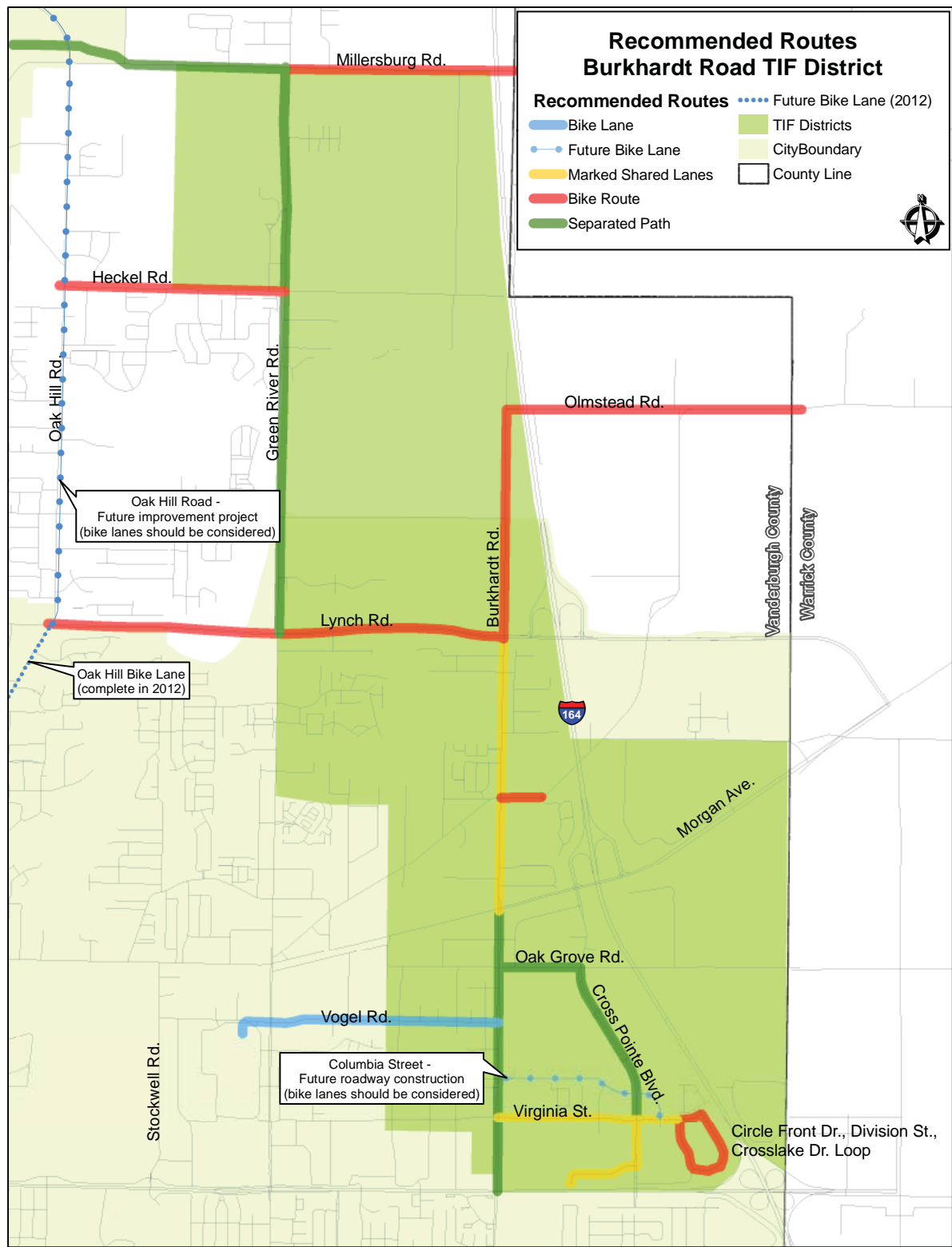


Recommended Pedestrian Facility



Recommended Intersection Improvement

Figure 8: Burkhardt Road TIF District Recommended Routes



1. BURKHARDT ROAD TIF DISTRICT

The routes that are proposed are intended to help residents connect with nearby amenities in a safe and efficient manner. Major north-south routes have been identified that will primarily consist of a multi-use path, and secondary routes branching out east and west have been identified to connect into the major routes. The major proposed routes are:

- Burkhardt Road – separated multi-use path; signed bike route
- Lynch Road – signed bike route in shoulder
- North Green River Road – separated multi-use path

Secondary Connector Routes that have been identified are:

- Vogel Road – sidewalks and dedicated bike lanes
- Cross Pointe Boulevard – signed bike route with shared lane markings
- Heckel Road – signed bike route
- Millersburg Road – separated multi-use path; signed bike route

A. BURKHARDT ROAD



Lloyd Expressway to Morgan Avenue – 1.25 miles

This segment of Burkhardt Road is one of the most heavily traveled roads in Evansville. This corridor is a major commercial destination with many large shopping stores and restaurants. In 2006, nearly 27,000 vehicles traveled through this area per day.

Concerns:

- Amount of traffic
- Address pedestrian crossings
- Roadway width

Recommendations:

The recommended facility for this segment of Burkhardt Road is a separated path within the existing right-of-way located along the east side of the road. The right-of-way would be an ideal location for a separated path due to its width. A path would keep bicyclists and pedestrians separate from vehicular traffic, making it safer and more desirable to bike and walk in this area, especially since the roadway is too narrow for a proper on-street bike facility. Intersection improvements need to be constructed to help pedestrians cross



Burkhardt Road - Existing



Burkhardt Road - Proposed multi-use path



Burkhardt Road safely. Improvements within the parking lots and shopping centers should also be considered to easily define space for bicycles and pedestrians.

Bus shelters should be considered along this route as well. Currently, there are several METS (Metropolitan Evansville Transit System) stops on Burkhardt Road that only consist of a bench. There are no pedestrian connections to these benches. Appropriate shelters should be considered in cooperation with the multi-use trail.

Burkhardt Road



Morgan Avenue to Lynch Road – 1.25 miles

This segment of Burkhardt Road has more industrial and rural land uses than the previous mentioned segment. There are two vehicle travel lanes on both sides of the road, each lane being approximately 12 feet wide. There is a center turn lane that is approximately 15 feet wide that stretches from Morgan Avenue to Lynch Road. Since the major destination points within this segment are residential neighborhoods and apartment complexes, a bike facility and new constructed sidewalks will provide the surrounding neighborhoods with a connection to the nearby commercial centers.

Concerns:

- Crossing Morgan Avenue
- Roadway width
- Land acquisition for sidewalks

Recommendations:

It is recommended that the multi-use path terminate at Morgan Avenue. Proper pavement markings are essential in order for path users to safely cross Morgan Avenue. Marked shared lanes with sharrows is recommended for both sides of Burkhardt Road north of Morgan Avenue. If a bike lane is to be considered, the lane striping would need to be repainted to make vehicle travel lanes narrower to accommodate room for the bike lane. Bike lanes could be included when this segment of Burkhardt Road needs to be resurfaced. However, in this area, a shared lane would be sufficient.

Sidewalks are recommended on the east side of Burkhardt Road from Morgan Avenue to Old Boonville Highway, and on the west side of Burkhardt Road from Old Boonville Highway to Lynch Road. Based upon the surrounding land uses, having sidewalks on one side of the road within this segment is most logical and cost effective. Intersection improvements will need to be made to the intersection of Burkhardt Road and Old Boonville Highway to ensure a safe crossing environment for users.

- i. A signed bike route is also recommended on Old Boonville Highway east of Burkhardt Road to allow for a connection to the Arbors at Eastland Apartments. This segment would be approximately 0.25 miles in length and would encourage residents of this apartment complex to bike to the nearby commercial centers.

Lynch Road to Olmstead Road – 1 mile

Burkhardt Road, north of Lynch Road, is primarily a residential road that is between 20 and 24 feet wide. In 2008, there were roughly 1,300 cars that traveled on this section of Burkhardt Road daily, which is low-volume.

Concerns:

- Roadway width

Recommendations:

Installing bike route signs is recommended. With the low traffic volume and straight, flat topography, this portion of Burkhardt Road is an ideal connection to the Blue Grass Fish and Wildlife Area and the surrounding recreational bike routes via Olmstead Road and Stevenson Station Road. These roads should be signed as well, and cooperation with Warrick County to do so would be needed.



B. LYNCH ROAD



Burkhardt Road to Oak Hill Road - 2 miles

The Lynch Road route, especially in this area, would primarily serve as a connector route between other bike routes. Lynch Road is suitable for a bike route because of the paved shoulders.

Concerns:

- Rumble strips in shoulder

Recommendations:

A signed bike route is recommended in the paved shoulder on both sides of Lynch Road. The shoulder width is between 10 and 11 feet wide. The shoulder width does narrow slightly as an intersection approaches, so additional measures will need to be taken in these areas to ensure bicyclist safety. The minimum width for a bike route in the shoulder according to the AASHTO Guide for the Development of Bicycle Facilities is four (4) feet. If the bike route is on a road where



the vehicle travel speeds are greater than 50 mph (Lynch Road has a speed limit of 50 mph), five (5) feet or more is recommended. The 10-11 foot shoulder makes this ideal for a bike route. However, there are rumble strips located throughout this corridor in the shoulder. Portions of these would need to be removed to accommodate a smooth biking surface.

Green River Road



C. NORTH GREEN RIVER ROAD



Lynch Road to Heckel Road – 1.5 miles

Green River Road north of Lynch Road has recently been widened from a two lane road to a four lane road. There is not enough roadway width to accommodate a bike facility.

Concerns:

- Bridge work
- Property acquisition

Recommendations:

A multi-use separated path is recommended for North Green River Road because there is not adequate space for on-street facilities. This facility will accommodate several large subdivisions, providing residents with easy access to commercial areas. It is recommended that the path be constructed on the east side of Green River Road from Lynch Road to Heckel Road. This would give users an easier direct path across Lynch Road between the commercial areas and apartment/residential areas. This path would function the same way as the Pigeon Creek Greenway Passage, catering to runners, walkers, and bicyclists. Its purpose would double as a recreational facility, as well as a method of non-motorized transportation. The path should be ten (10) feet wide (eight (8) feet minimum) to accommodate all users.

There are several small bridges that are built over creeks and ditches along North Green River Road. Small bridges over these creeks and ditches will need to be constructed. Another option is to widen the existing vehicle bridges to include the separated trail. It is important that the bridges be wide enough to allow room for both vehicles and path users in a safe manner if existing bridges are widened.

Heckel Road to Millersburg Road – 1 mile

There is currently no development located on the west side of North Green River Road between Heckel Road and Millersburg Road, however, commercial businesses are planned to be constructed between Heckel

Road and Goebel Soccer Complex. There is a ten (10) foot high retaining wall along the Goebel Soccer Park lake. There are also utility lines that run approximately 30 feet off of the west side of the road.

Concerns:

- Bridge work
- Future commercial businesses
- Retaining wall along the Goebel Soccer Park lake

Recommendations:

It is recommended that the separated multi-use path be constructed along the west side of Green River Road from Heckel Road to Millersburg Road. A pedestrian bridge would need to be built to cross Firlick Creek (or widen the existing bridge to safely accommodate both pedestrian/bicyclists and vehicles). Fencing and guardrail would need to be installed along the existing retaining wall. The path would need to be taken into consideration when constructing the commercial development. The 30 feet of space between the roadway and utility lines is sufficient for a separated path, while also accommodating a buffer space between the path and roadway.

This separated path would connect with the six (6) foot separated sidewalk/bicycling facility that is currently being designed on the same side of North Green River Road north of Millersburg Road.

A crosswalk and appropriate signage will need to be installed to ensure a safe crossing environment at the intersection of North Green River Road and Millersburg Road.

D. MILLERSBURG ROAD



Green River Road to Oak Hill Road – 1 mile

Currently, Millersburg Road is a 20 foot wide two lane road. Plans are in place to widen Millersburg Road to three lanes and include a separate multi-use path for cyclists and pedestrians on the south side of the road. The plans indicate that the path will be eight (8) feet wide and located approximately seven (7) feet away from the outside travel lane.

Concerns:

- None

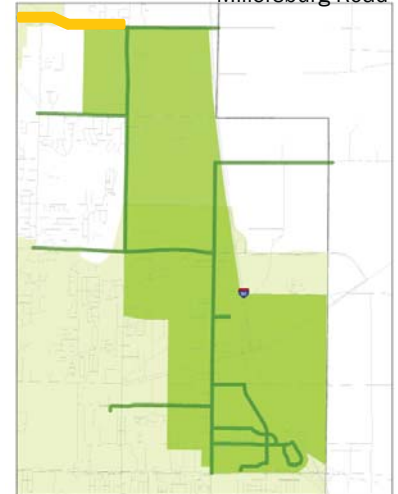
Recommendations:

Improvements are already underway to include a separated multi-use path, so there are no recommendations for this corridor at this time.

Green River Road



Millersburg Road



Millersburg Road



Green River Road to County Line Road – 1 mile

Millersburg Road, from Green River Road east to County Line Road, is included in the Evansville MPO's Long Range Transportation Plan as a 2025 roadway widening project. Currently, it is a two-lane road that is roughly 20 feet wide. Millersburg Road, once in Warrick County, intersects with St. Johns Road. St. Johns Road is signed as one of the bike routes in the Blue Grass Fish and Wildlife Area. Coordination with Warrick County will be necessary to sign the Warrick County portions of Millersburg Road as a bike route.

Concerns:

- Roadway width

Recommendations:

Until the roadway widening project can be constructed, it is recommended to sign this portion of Millersburg Road as a bike route. This will establish the connections between the Burkhardt Road TIF District, the recreational routes in the Blue Grass Fish and Wildlife area, and begin to connect places on a regional level with easy access to Chandler. Informational plaques that include distances and directions should be included along with the bike route signs. Again, coordination with Warrick County is necessary in order for this entire route to be designated as a bike route.

Heckel Road



E. HECKEL ROAD



Green River Road to Oak Hill Road – 1 mile

This one mile portion of Heckel Road is currently a two lane road and is between 18 and 20 feet wide. In 2007, there was a low traffic volume of just over 900 cars traveling westbound. Heckel Road is also flat and straight which will help cyclists and motorists be more aware of one another.

Concerns:

- Roadway width

Recommendations:

Signing Heckel Road as a bike route is recommended because of the direct connection it provides for many residents to the multi-use path proposed on Green River Road and to Oak Hill Road. This one-mile segment would primarily only serve those residents that live within this area (Keystone Subdivision) and would likely not generate a large number of cyclists. It is important, however, to make sure this segment is well signed to alert motorists that cyclists may be present.

F. VOGEL ROAD



Burkhardt Road to Eastland Mall – 1.25 miles

Vogel Road runs east-west from Burkhardt Road to Green River Road and Eastland Mall. This would create an easy connection from Burkhardt Road to Eastland Mall. It has one travel lane in each direction, and currently, each lane is approximately 20 feet wide. There are no sidewalks on either side of the street. However, there are many curb cuts for business parking lots throughout this corridor.

Concerns:

- Amount of curb cuts
- Land acquisition for sidewalks
- Bridge over Stockfleth Ditch

Recommendations:

Given the existing width of the road, bike lanes would be ideal. According to AASHTO bike lane dimensions, the minimum width of a bike lane is four (4) feet on a roadway that has no curb and gutter, or five (5) feet minimum if adjacent to parking, from the face of the curb or guardrail. AASHTO also recommends that the minimum vehicle travel lane width is 12 feet; however, this can be reduced to ten (10) feet to accommodate bicyclists. On Vogel Road, a bike lane can easily fit within the existing space. It is recommended that a 6 foot wide bike lane be added. A 14 foot vehicle travel lane would still exist. Both the bicycle lane and travel lane would be wider than the recommended minimum.

There are currently no sidewalks along Vogel Road. This is an important east/west route for both bike and pedestrians. Sidewalks should be constructed to provide pedestrians with safe accommodations. The bridge over Stockfleth Ditch may need to be widened in order to accommodate sidewalks.

In the future, improvements to the Vogel Road/Green River Road intersection should be made to ensure a safe crossing environment for cyclists and pedestrians.

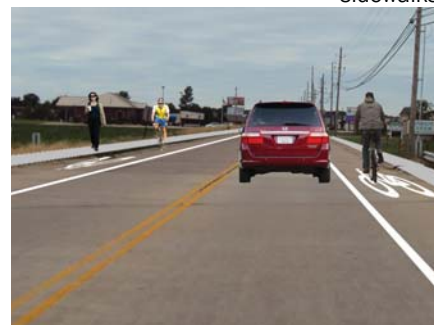
Vogel Road



Vogel Road - Existing



Vogel Road - Proposed bike lane and sidewalks



G. VIRGINIA STREET



Burkhardt Road to Circle Front Drive – 0.9 miles

Virginia Street (east of Burkhardt Road) is a two lane road with a constant center turn lane. On average, the total width of the street is 36 feet, or 12 feet per lane. The newer portion of Virginia Street

tif districts **BICYCLE + PEDESTRIAN** system plan

Virginia Street - Existing



(mostly east of Bentee West Court) is around 40 feet wide. There is not adequate space to provide marked bicycle lanes on this street without widening it.

Sidewalks are present on portions of Virginia Street. They start just west of Bentee West Court and terminate just west of the intersection with East Columbia Street, which is about one third of a mile. Virginia Street is an important east/west connection route, providing a link between several apartment complexes and commercial districts. This route would also connect to the proposed multi-use path on Burkhardt Road and would provide a recreational activity for nearby residents.

Virginia Street - Proposed Shared Lane and sidewalks



Concerns:

- Amount of traffic
- Amount of curb cuts

Recommendations:

Because of the roadway width, bike lanes would not be able to be added on Virginia Street. However, designating Virginia Street as a route using marked shared lanes is acceptable. Signs with directional/destination information, as well as “sharrow” pavement markings should be installed along the route. This is an important connector route because it will link two apartment complexes with the shopping centers on Burkhardt Road.

Sidewalks should also be added along the parts of Virginia Street that currently do not have them, especially because of the connection between the apartment complexes and the shopping areas.

Virginia Street; with future Columbia Street Route



H. COLUMBIA STREET*



Burkhardt Road to Cross Pointe Boulevard - 0.60 miles

Columbia Street will run just north and parallel to Virginia Street. Currently, the portion of Columbia Street from Burkhardt Road (small segment exists as entrance into Sam’s Club) and Bentee West Court has not been constructed. This will be constructed in the future as the planned development in this area is built. It is recommended that as Columbia Street is being designed, a dedicated bike lane and sidewalks are included in the plans. This will not only benefit the existing residential apartment units and commercial areas, but also benefit the new residents and businesses that will locate into the new development once it is constructed.

* Future route on network

I. CIRCLE FRONT DRIVE/EAST DIVISION STREET/CROSSLAKE DRIVE

LOOP — 0.6 MILES



Currently, there is not a lot of development along Circle Front Drive, East Division Street and Crosslake Drive. The existing land uses consist of the Crosslake Apartments, furniture stores, several hotels, Tri-State Orthopedics and a car dealership. There is vacant land on both sides of Crosslake Drive that could potentially be developed in the future.

Concerns:

- Lack of current destinations

Recommendations:

These roadways are wide enough to accommodate a biking facility. The vehicle travel lanes on Crosslake Drive are 20 feet. A six (6) foot bike lane can be added to both sides of the street, still allowing for 14 foot travel lanes. East Division Street has approximately 19 feet of travel lanes, allowing for a six (6) foot bike lane and 13 foot vehicle travel lanes on each side of the street. Circle Front Drive is the narrowest of the streets in this loop. The vehicle travel lanes are approximately 16 feet wide. This isn't sufficient for dedicated bike lanes, but marked shared lanes would be ideal. Shared lane markings (sharrows) and direction/destination signage should be included on all of these routes.

Having bike lanes/routes in an underdeveloped area will make it more attractive to potential developers. Sidewalks should be added once the area begins to develop.

Circle Front Drive/East Division Street/Crosslake Drive Loop



J. EAST INDIANA STREET



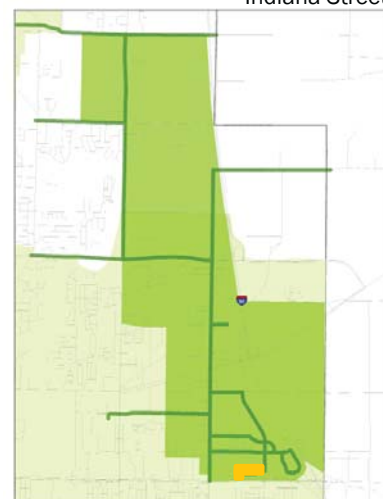
Cross Pointe Boulevard to The Lloyd Crossing shopping complex – 0.4 miles

Indiana Street is a two lane street with a center turn lane. There are businesses and restaurants with parking lot entrances facing Indiana Street, creating several curb cuts. There are currently sidewalks on both sides of Indiana Street, creating a pedestrian connection from Cross Pointe Boulevard to The Lloyd Crossing shopping complex.

Concerns:

- Curb cuts
- Cross Pointe intersection – proper signage is important

Indiana Street



Recommendations:

It is recommended that East Indiana Street be designated as a marked shared lane with the appropriate signage and “sharrow” street markings. This route will create a connection between the businesses and apartments on Virginia Avenue to The Lloyd Crossing shopping complex. It will be important that bicyclists understand that the route on Cross Pointe Boulevard ends at Indiana Street, and that continuing on to cross the Lloyd Expressway is not recommended.

K. CROSS POINTE BOULEVARD



Oak Grove Road to East Columbia Street – 0.6 miles

Cross Point Boulevard is a four-lane boulevard with a grassy median. Each vehicle lane is approximately 12 feet in width, with occasional turn lanes of almost 13 feet in width. There are no shoulders or additional space that is necessary for a bicycle facility. Currently, Cross Point Boulevard is serving as a vehicle connection between the Lloyd Expressway and Oak Grove Road/Morgan Avenue, with no destination points between. There are plans for development along this entire corridor that will incorporate new housing units, commercial districts, offices and convenience services such as a medical office and restaurants.

Concerns:

- Current speed of vehicles

Recommendations:

Since there are no shoulders or additional space to accommodate a bicycle facility, a separated path would be ideal along the east side of this corridor. This path would tie into the preliminary plans for future development in this area, as well as connect with existing developments. This proposed separated path could also be connected with the proposed Burkhardt Road separated path by Oak Grove Road.

Columbia Street to Indiana Street – 0.3 miles

This segment of Cross Pointe Boulevard currently has sidewalks on both sides of the street. There is one small section, however, that does not have sidewalks. This is located at the southeast corner of the intersection at Cross Pointe Boulevard and East Columbia Street.

From sidewalk edge to sidewalk edge, the narrowest width of Cross Pointe Boulevard within this segment is approximately 60 feet. There

Cross Pointe Boulevard



Cross Pointe Boulevard



are 4 vehicle travel lanes and one center turn lane. Each lane is 12 feet wide. This does not allow proper space to provide a dedicated bike lane unless restriping was to occur.

Concerns:

- Amount of traffic
- Lane width

Recommendations:

Because there is not adequate space within the existing roadway to provide a bike lane, it is recommended that this segment of Cross Pointe Boulevard be signed and marked as a marked shared lane. This would entail marking the outside lanes with “sharrows”, and placing bike route signs with directional/destination information along the route. According to the AASHTO Guide for the Development of Bicycle Facilities, a street can be designated as a route if it provides continuity to other bicycle facilities such as bike lanes and shared use paths. This route will connect the commercial uses in the Lloyd Crossing shopping development (Kohl’s, Home Depot, Wal-Mart and others) by way of the route proposed on East Indiana Street, as well as connect to the separated path proposed along Cross Pointe Boulevard south of this segment.

Cross Pointe Boulevard - Existing sidewalks



L. OAK GROVE ROAD



Burkhardt Road to Cross Pointe Boulevard – 0.4 miles

This small segment of Oak Grove Road is relatively narrow. It is a two lane road that is approximately 24 feet wide. There are businesses located just north of Oak Grove Road, generating a lot of traffic within this short distance.

Concerns:

- Roadway width
- Amount of traffic turning into the commercial area

Recommendations:

Because of the recommended separated path along the east side of both Burkhardt Road and Cross Point Boulevard, a separated path is also recommended along the south side of Oak Grove Road. This is the northeast corner of a development project that is currently being designed, and the separated path can be incorporated within the design plans. This short separated path segment would create a connection between the previously mentioned proposed separated paths.

Oak Grove Road



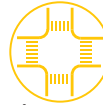
2. BURKHARDT ROAD TIF DISTRICT INTERSECTION IMPROVEMENTS

The following section includes recommended improvements to intersections within the Burkhardt Road TIF Districts. With an increase in bicycle and pedestrian facilities, it is important that safe intersection crossings are provided to accommodate users. These improvements should be done when the surrounding facilities are implemented.

Burkhardt Road/ East Lloyd Commons and Lloyd Crossing shopping complexes



A. BURKHARDT ROAD/EAST LLOYD COMMONS AND LLOYD CROSSING SHOPPING COMPLEXES



Currently, the intersection on Burkhardt Road with the East Lloyd Commons and Lloyd Crossing shopping complexes (Walmart and Best Buy) is one of the busiest intersections in Vanderburgh County. To safely accommodate cyclists and pedestrians in this busy area, intersection improvements should be considered. Recommended improvements include crosswalks, a pedestrian island and pedestrian signals, and should be addressed as part of the path development along Burkhardt Road.

Crosswalk – It is recommended that a crosswalk be placed on the north side only of this intersection across Burkhardt Road. This will keep pedestrians crossing in one area. The crosswalk should be marked using a Continental striping pattern (from PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System; USDOT, FHWA). This marking pattern is easily seen by approaching motorists. Advanced stop lines should also be installed approximately ten (10) feet away from the crosswalk. The advanced stop lines allow pedestrians and drivers to have a clearer view of each other and more time in which to assess each other's intentions. They also help ensure that drivers in all lanes have a clear view of a crossing pedestrian.

A crosswalk is also recommended on the east side of Burkhardt Road crossing the entrance into the Lloyd Crossing shopping complex because of the proposed multi-use separated path.

Pedestrian Island – There is currently a landscaped median in the center of Burkhardt Road that is approximately 15 feet wide at this location. A pedestrian island should be considered as part of this median because there are six lanes of traffic that users need to cross.

Pedestrian Signal Phasing – An advanced pedestrian signal operation (sometimes referred to as Leading Pedestrian Interval (LPI)) is recommended at this intersection. This type of signal displays a two-

to-four-second WALKING PERSON (symbolizing WALK) signal indication in advance of the vehicular green indication, leaving vehicles with an all-red interval. The advance signal phase allows pedestrians to establish a presence in the intersection and reduces vehicle-pedestrian conflicts.

B. BURKHARDT ROAD/VOGEL ROAD INTERSECTION



Considering the recommendations of a separated multi-use path on the east side of Burkhardt Road and bike lanes and sidewalks on both sides of Vogel Road, improvements should be made to the intersection to ensure a safe crossing for facility users. Recommended treatments include a marked crosswalk with advanced stop lines, pedestrian signal phasing and the appropriate signage to alert motorists of the crossing.

Crosswalk – It is recommended that the crosswalk be marked using a Continental striping pattern (from PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System; USDOT, FHWA). This marking pattern is easily seen by approaching motorists. Advanced stop lines should also be installed approximately ten (10) feet away from the crosswalk. The advanced stop lines allow pedestrians and drivers to have a clearer view of each other and more time in which to assess each other's intentions. They also help ensure that drivers in all lanes have a clear view of a crossing pedestrian.

Pedestrian Signal Phasing – An advanced pedestrian signal operation (sometimes referred to as Leading Pedestrian Interval (LPI)) is recommended at this intersection. This type of signal displays a two-to-four-second WALKING PERSON (symbolizing WALK) signal indication in advance of the vehicular green indication, leaving vehicles with an all-red interval. The advance signal phase allows pedestrians to establish a presence in the intersection and reduces vehicle-pedestrian conflicts.

Burkhardt Road/Vogel Road Intersection



C. BURKHARDT ROAD/MORGAN AVENUE INTERSECTION



Considering the recommendations of a separated multi-use path on the east side of Burkhardt Road (south of Morgan Avenue) and shared bike route and sidewalks (north of Morgan Avenue), improvements should be made to the intersection to ensure a safe crossing for facility users. Recommended treatments include a marked crosswalk with advanced stop lines, pedestrian signal phasing and the appropriate signage to alert motorists of the crossing.

Burkhardt Road/Morgan Avenue Intersection



Crosswalk – It is recommended that the crosswalk be marked using a Continental striping pattern (from PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System; USDOT, FHWA) on the east side of Burkhardt Road, connecting the multi-use path with the sidewalks and marked shared routes. This marking pattern is easily seen by approaching motorists. Advanced stop lines should also be installed at least ten (10) feet away from the crosswalk. The advanced stop lines allow pedestrians and drivers to have a clearer view of each other and more time in which to assess each other's intentions. They also help ensure that drivers in all lanes have a clear view of a crossing pedestrian.

Another crossing is also recommended on the north side of Morgan Avenue crossing Burkhardt Road. This ensures that southbound cyclists can cross Burkhardt Road before crossing south across Morgan Avenue.

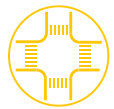
Pedestrian Signal Phasing – An advanced pedestrian signal operation (sometimes referred to as Leading Pedestrian Interval (LPI)) is recommended at this intersection. This type of signal displays a two-to-four-second WALKING PERSON (symbolizing WALK) signal indication in advance of the vehicular green indication, leaving vehicles with an all-red interval. The advance signal phase allows pedestrians to establish a presence in the intersection and reduces vehicle-pedestrian conflicts.

Signage – Appropriate signs are needed at this crossing to ensure the motorists on Morgan Avenue are aware of the crossing, and that motorists on Burkhardt Road know to look for pedestrians before making a right-turn. Signs are important to alert trail users of the railroad tracks.

Burkhardt Road/Old Boonville Highway Intersection



D. BURKHARDT ROAD/OLD BOONVILLE HIGHWAY INTERSECTION

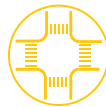


The bike route signs, pavement markings, and sidewalks for southbound cyclists and pedestrians on the west side of Burkhardt Road should stop at Old Boonville Highway. Crosswalks should be installed on the north side of Old Boonville Highway across Burkhardt Road, as well as on the east side of Burkhardt Road across Old Boonville Highway. This will gather all users (with the exception of southbound cyclists) on the east side of Burkhardt Road. Improvements recommended at this intersection include crosswalk markings and pedestrian signals.

Crosswalk – It is recommended that the crosswalks be marked using a Continental striping pattern (from PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System; USDOT, FHWA). This marking pattern is easily seen by approaching motorists. Advanced stop lines should also be installed approximately ten (10) feet away from the crosswalk. The advanced stop lines allow pedestrians and drivers to have a clearer view of each other and more time in which to assess each other's intentions. They also help ensure that drivers in all lanes have a clear view of a crossing pedestrian.

Pedestrian Signal Phasing - A Standard (or concurrent) timing signal is recommended at this intersection. This type of signal involves a WALKING PERSON (symbolizing WALK) signal indication, followed by a flashing UPRAISED HAND (symbolizing DON'T WALK) signal indication, that are displayed concurrently with the green indication for motorists, where motor vehicles may turn left or right after yielding to pedestrians.

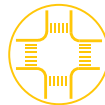
E. LYNCH ROAD/BURKHARDT ROAD INTERSECTION



A bike route is recommended for Burkhardt Road, both north and south of Lynch Road, as well as on Lynch road going west to Green River Road. There is a signal at this intersection. Signs should be placed on Burkhardt Road prior to the intersection to direct bicyclists to act as a vehicle and use the full lane. This will allow the bicyclists to cross the intersection with vehicles during the green light phase.



F. LYNCH ROAD/GREEN RIVER ROAD INTERSECTION



It is recommended that a multi-use path on the east side of North Green River Road be constructed. It is also recommended that a bike route be signed on the shoulders of Lynch Road (it may be necessary to fill in rumble strips to accommodate this facility). In order to provide a safe connection across Lynch Road, it is recommended to construct a multi-use path on the east side of Green River Road on the south side of Lynch Road, ending at Davis Lant Drive. There is currently a green space of about 20 feet between Green River Road and the Walgreens parking lot. This space can accommodate a separated path and provide a safe connection to the commercial district. However, there are currently utility lines within this green space that would need to be moved. Intersection improvements include a crosswalk, pedestrian signal and appropriate signage.



Crosswalk – It is recommended that the crosswalk be marked across Lynch Road on the east side of Green River Road in a Continental striping pattern (from PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System; USDOT, FHWA). This marking pattern is easily seen by approaching motorists. Stop lines should be placed approximately 10 feet away from the crosswalk; however, greater setbacks can help ensure that a motorist’s view of pedestrians within the crosswalk is not screened by vehicles in adjacent lanes.

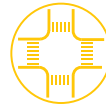
Pedestrian Signal – An exclusive pedestrian phasing display that displays the WALKING PERSON (symbolizing WALK) and flashing UPRAISED HAND (symbolizing DON’T WALK) signal indications without green indications for any conflicting vehicle movements is recommended for this intersection. This will allow trail users to safely travel across Lynch Road without having to worry about vehicle movements.

Signage – Appropriate signs are needed at this crossing to ensure the motorists on Lynch Road are aware that cyclists and pedestrians may be crossing.

Green River Road/Heckel Road Intersection



G. GREEN RIVER ROAD/HECKEL ROAD INTERSECTION



A multi-use path is recommended on the east side of North Green River Road starting at Lynch Road and traveling north to Heckel Road. Intersection improvements are recommended to provide a safe crossing environment for users. Recommended treatments include a marked crosswalk and pedestrian signals.

Crosswalk – It is recommended that the crosswalk be marked using a Continental striping pattern (from PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System; USDOT, FHWA). This marking pattern is easily seen by approaching motorists.

Pedestrian Signal Phasing - A Standard (or concurrent) timing signal is recommended at this intersection. This type of signal involves a WALKING PERSON (symbolizing WALK) signal indication, followed by a flashing UPRAISED HAND (symbolizing DON’T WALK) signal indication, that are displayed concurrently with the green indication for motorists, where motor vehicles may turn left or right after yielding to pedestrians.

3. US 41 TIF DISTRICT

The US 41 TIF District varies significantly from the Burkhardt Road TIF District. This TIF District is very rural with a few larger industrial businesses and far less commercial development. Aside from the large industrial businesses, North Middle and High School is the most active destination. There are primarily two large residential subdivisions. There are fewer proposed routes within the US 41 TIF District when compared to the Burkhardt Road TIF District. The routes that are proposed include:

- Darmstadt Road – signed bike route
- Old State Road (portion of) - signed bike route
- Baseline Road – signed bike route
- Korff Road – signed bike route

Two routes are included on the proposed routes map as a future route. These routes currently do not support a safe bicycling environment, but with changes in the future, would be a nice asset for the bicycling network. These routes include:

- Boonville New Harmony Road
- Peck Road

A separated multi-use trail is also proposed between North Middle and High school and Kingsmont Subdivision.

A. BOONVILLE NEW HARMONY ROAD*



Darmstadt Road to Martin Road – 1 mile

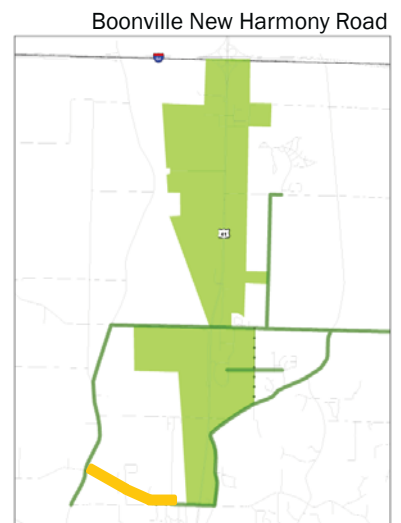
Boonville New Harmony Road is a two lane road that is approximately 20 feet wide. In 2007, over 3,000 vehicles traveled this segment of road per day. The topography could create sight-distance issues for both cyclists and motorists. This is a residential road that is a connection between Darmstadt and the Vanderburgh County 4-H Center.

Concerns:

- Narrowness of roadway
- Amount of traffic

Recommendations:

Because Boonville New Harmony Road is narrow with a fair amount of traffic, a bike facility is not recommended at this time. However, this



* Future route on network

Figure 9: US 41 TIF District Recommended Routes



route will remain on the bike and pedestrian network as a future route as it provides a direct linkage between Darmstadt and the commercial district at US 41. When roadway improvements are considered for Boonville New Harmony Road, bike and pedestrian facilities should also be considered. This road is maintained by the Town of Darmstadt, so coordination with the Town is necessary if improvements are to be made.

B. DARMSTADT ROAD/OLD PRINCETON ROAD



Boonville New Harmony Road to Baseline Road – 1.75 miles

Darmstadt Road is between 20 and 22 feet wide. It is slightly wider than Boonville New Harmony Road. It is also less hilly, providing motorists with a clearer sight line. Darmstadt Road “Y’s” into Old Princeton Road. Darmstadt Road is maintained by the Town of Darmstadt.

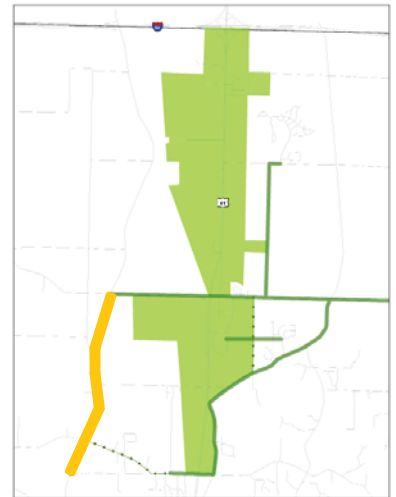
Concerns:

- Narrowness of roadway

Recommendations:

It is recommended that this route be signed as a bike route with signs installed, along with informational plaques stating destinations and distances. This will intersect with Baseline Road and the proposed bike route connection to the Blue Grass Fish and Wildlife Area bike routes. Coordination with the Town of Darmstadt will be needed if this route is implemented.

Darmstadt Road/Old Princeton Road



C. BASELINE ROAD



Old Princeton Road to County Line Road – 5.5 miles

Baseline Road is approximately 20 feet wide, and is straight and flat between Old Princeton Road and Old State Road. However, east of Old State Road, it does become more hilly. In 2010, just over 1,300 vehicles traveled on this segment. Baseline Road can create a connection to the Town of Darmstadt and the Blue Grass Fish and Wildlife Area, but motorists need to be aware of this.

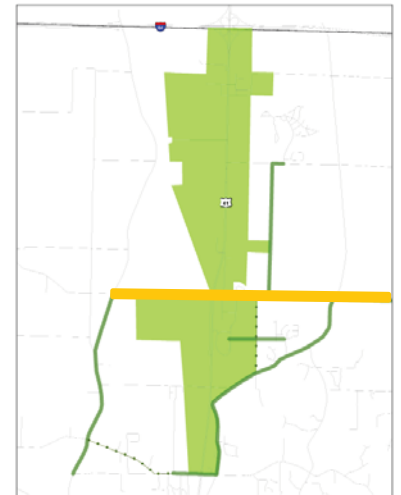
Concerns:

- Narrowness of roadway

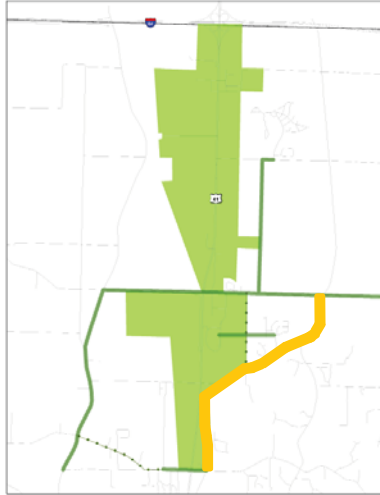
Recommendations:

It is recommended that this segment of Baseline Road be signed as a bike route. This route would primarily serve recreational riders and be designed and function much like the Burdette Park Discovery Routes. It is important that the roadway be well signed to ensure motorists understand that bicyclists may be present.

Baseline Road



Old State Road



D. OLD STATE ROAD



Boonville New Harmony Road to Baseline Road– 2.75 miles

Old State Road ranges between 20 and 22 feet in width. This corridor is primarily a residential corridor that includes Scott Elementary School and a church. This route is included in the Great Pumpkin Metric event hosted by the Evansville Bicycle Club, and would create an important connection between the west side of US 41 and Baseline Road, which could ultimately connect with the Blue Grass Fish and Wild Life Area bike routes (via St Johns Road in Warrick County).

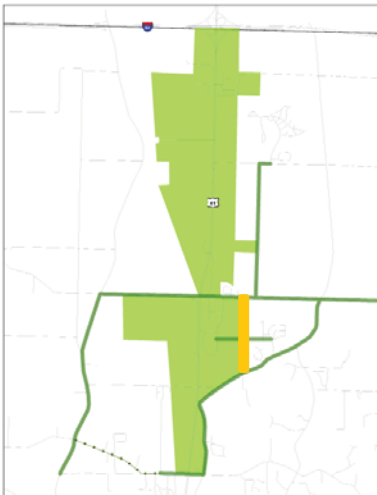
Concerns:

- Narrowness of roadway
- Amount of driveways

Recommendations:

It is recommended that this segment of Old State Road be signed as a bike route because of the connection it would provide to the future proposed route on Peck Road and North Junior High and High Schools, as well as to the connection to the commercial areas at US 41 and Boonville New Harmony Road for residents. Bike route signs and share the road warning signs should be installed to ensure motorists are aware that bicyclists may be present.

Peck Road



E. PECK ROAD*



Old State Road to Baseline Road– 0.85 miles

Peck Road ranges in width between 16 feet and 18 feet. This is too narrow to safely accommodate both vehicles and bicycles. However, this corridor would provide an important linkage to North High School and Baseline Road, which could ultimately connect with Blue Grass Fish and Wildlife Area.

Concerns:

- Narrowness of roadway

Recommendations:

Provided that Peck Road is so narrow, bicycle facilities are not recommended until roadway improvements are made. Bike and pedestrian facilities should be included within any roadway project on Peck Road. The Peck Road route will remain on the bike and pedestrian network as a future facility.

F. NORTH JUNIOR HIGH AND HIGH SCHOOL CONNECTION



North High School to Kingsmont Subdivision – 0.5 miles

North Junior High and High School is located at Baseline Road and US 41. There are a small number of subdivisions nearby the school property. These subdivisions and neighborhoods have been growing within recent years. A developer of an adjacent subdivision has expressed interest in incorporating bicycle and pedestrian facilities not only within the subdivision, but also outside of the subdivision to connect with North High School. The developer has included a multi-use path in the development plans.

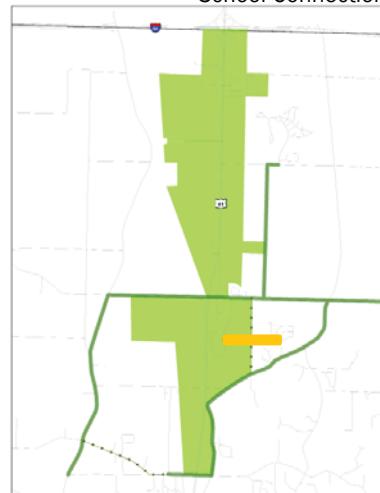
Concerns:

- None

Recommendations:

It is recommended that the multi-use path be integrated within the expansion of the adjacent subdivisions. The development plans include a multi-use path from the subdivision, crossing Peck Road, and leading into the east side of the North High School complex where the baseball/softball fields, tennis courts, and football stadium are located. This not only provides a safe connection point between the subdivision and the school, but also a facility for students to use during practices. A multi-use path and its recreational opportunities will help attract new residents to this area as well.

North Junior High and High School Connection



G. SCOTT ELEMENTARY SCHOOL CONNECTION



Old State Road to Kingsmont Subdivision – .25 miles

Scott Elementary School is located on Old State Road, just south of Kingsmont Subdivision. The school's parking lot entrance and exit is off of Old State Road, with an additional exit in the subdivision on Arborfield Drive. The parking lot has sidewalks that lead to the entrances of the school building. The subdivision also has sidewalks; however, they are only built on lots where houses are built. Undeveloped lots do not have sidewalks, but should be incorporated with new home construction.

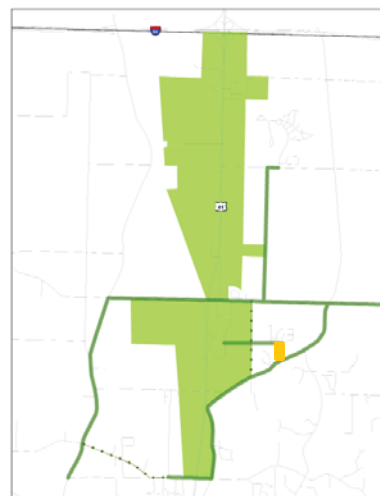
Concerns:

- None

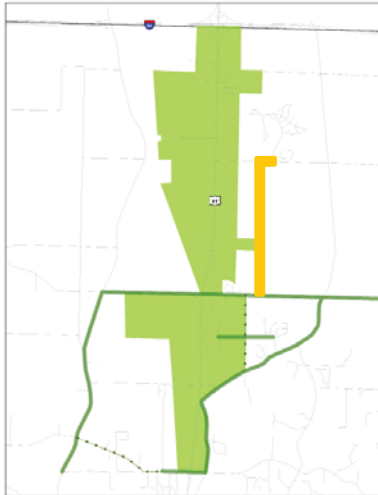
Recommendations:

It is recommended that the proposed North Junior High and High School Connection be linked to Scott Elementary School via Parmely Drive and Kingsmont Drive. This will provide a safe connection for

Scott Elementary School Connection



Korff Road



elementary school children without having to deal with the traffic on Old State Road. Signs directing users to the path should be placed in the appropriate locations.

H. KORFF ROAD



Baseline Road to Volkman Road - 1.5 miles

Korff Road is between 18 and 20 feet wide. There are very few residential uses along this route. This route is a direct connection between Cambridge Village and Baseline Road which will connect to North Middle and High School and the Blue Grass Fish and Wildlife Area.

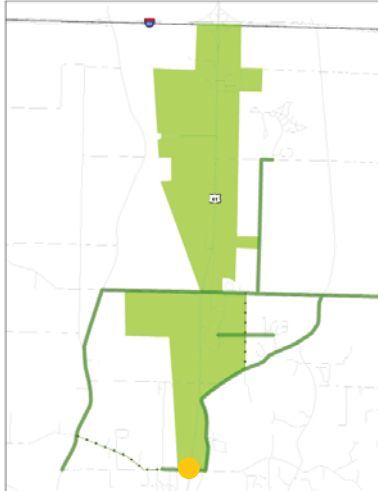
Concerns:

- Narrowness of roadway

Recommendations:

It is recommended that Korff Road be signed as a bike route. While it is not expected to generate a lot of bicycle traffic, providing the connection to one of the largest residential communities in the area helps to establish a working network. Motorists and cyclists will be able to see one another given the flatness and openness of the road.

US 41 and Boonville New Harmony Road Intersection



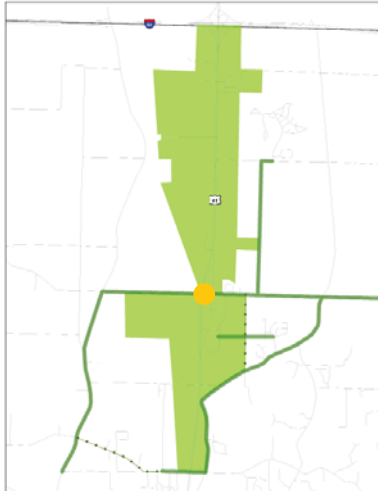
4. US 41 TIF DISTRICT INTERSECTION IMPROVEMENTS

A. US 41/BOONVILLE NEW HARMONY ROAD INTERSECTION

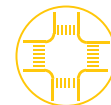


A signed bike route is recommended on Boonville New Harmony Road between Darmstadt Road and Old State Road (a portion of the recommended route is designated as a future route). In order for this to be implemented, it is suggested that a bicycle traffic signal be installed. This should allow for bicycles, when present, to get a green light signal when it is safe to cross US 41. Proper pavement markings should also be installed to help guide cyclists across the intersection.

US 41 and Baseline Road Intersection



B. US 41/BASELINE ROAD INTERSECTION



A signed bike route is recommended on Baseline Road. In order for this to be implemented, it is suggested that a bicycle traffic signal be installed at the US 41 crossing. This should allow for bicycles, when present, to get a green light signal when it is safe to cross US 41. Proper pavement markings should also be installed to help guide cyclists across the intersection.

phasing and implementation

The TIF Districts Bicycle and Pedestrian Plan outlines a comprehensive bicycle and pedestrian network for the two TIF Districts. Each TIF District was divided into suggested phases for implementation. This chapter summarizes the phases for each TIF District, and identifies possible funding sources.

1. BURKHARDT ROAD TIF DISTRICT

Table 2: Burkhardt Road Improvement Phasing

PHASE 1		
	Route	Improvement
	Burkhardt Road	Separated Multi-Use Path
	Virginia Street	Marked Shared Route; sidewalks
	Cross Pointe Boulevard	Marked Shared Route;
	Indiana Street	Marked Shared Route
	Circle Front Dr., Division St., Crosslake Dr. Loop	Marked Shared Route
	Oak Grove Road	Separated Multi-Use Path
	Vogel Road	Bike Lane; sidewalks
PHASE 2		
	Burkhardt Road	Marked Shared Route; Signed Bike Route
	Lynch Road (to Green River Road)	Signed Bike Route
	Green River Road	Separated Multi-Use Path
PHASE 3		
	Lynch Road (to Oak Hill Road)	Signed Bike Route
	Heckel Road	Signed Bike Route
	Millersburg Road	Separated Multi-Use Path; Signed Bike Route
PHASE 4		
	Columbia Street	Bike Lane; sidewalks
	Oak Hill Road	Bike Lane or Signed Bike Route

PHASE 1

Phase 1 is the southern portion of the Burkhardt Road TIF District. This area includes the most commercial uses, as well as the most vehicle traffic. The improvements recommended within Phase 1 will help connect many of the commercial areas within the TIF District with one another while providing safe and easy bicycling and pedestrian routes.

PHASE 2

Phase 2 includes the marked shared routes and signed shared routes on North Burkhardt Road, the multi-use separated path on North Green River Road and the signed bike route on Lynch Road to connect the two. These improvements will allow residents towards the northern portion of the TIF District to be connected with the commercial areas in the southern portion.

PHASE 3

Phase 3 includes the secondary routes that spur off of the separated path on North Green River Road. These routes will connect to the future improvements on Oak Hill Road, as well as help to create a connection to the Blue Grass Fish and Wildlife Area.

PHASE 4

Phase 4 includes bike lanes and sidewalks on Columbia Street. It is recommended that these facilities be included when the street is designed and constructed. It also includes a continued bicycle facility on Oak Hill Road north of Lynch Road.

Figure 10: Burkhardt Road TIF District Project Phasing

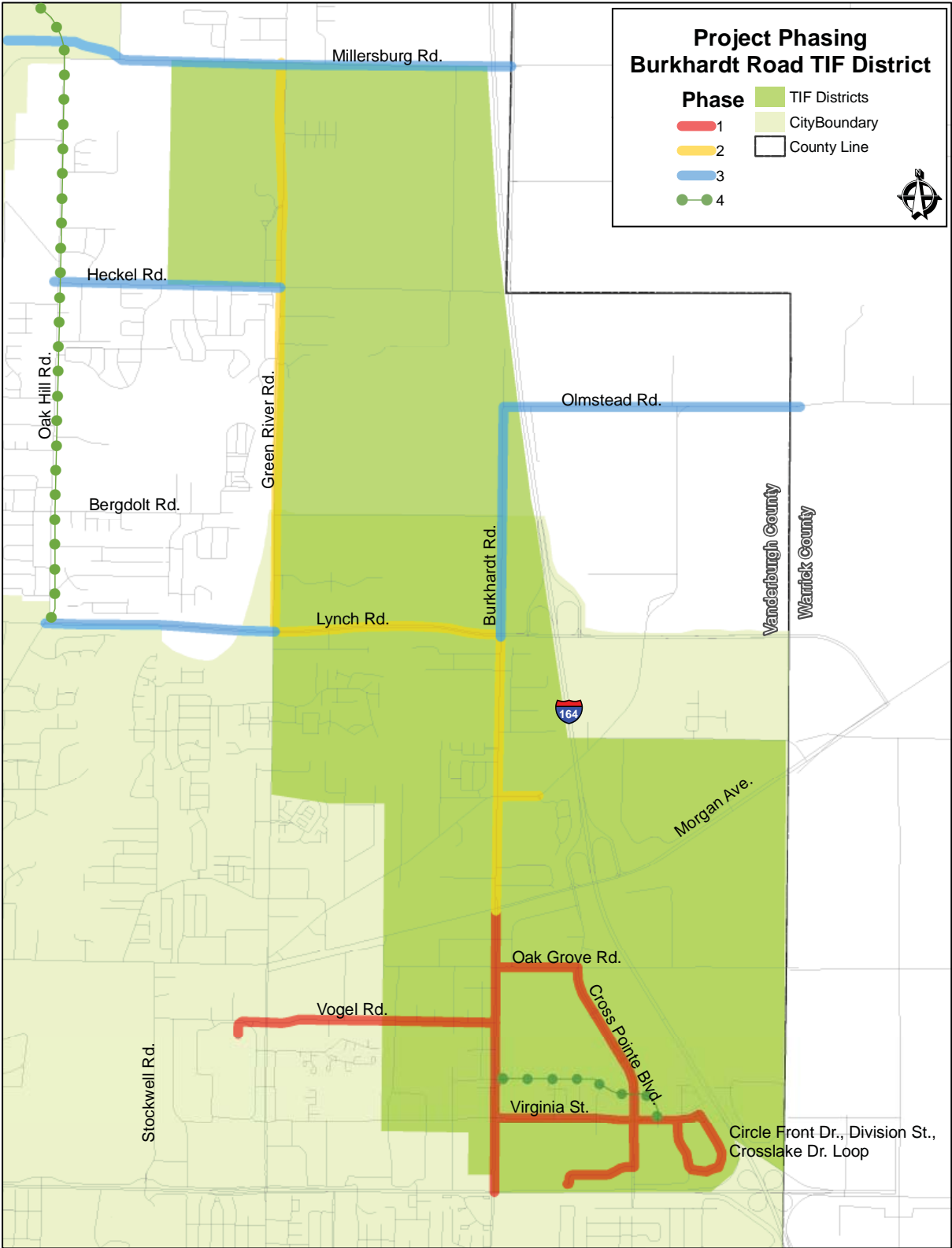


Figure 11: US 41 TIF District Project Phasing



2. US 41 TIF DISTRICT

Table 3: US 41 Improvement Phasing

PHASE 1		
	Route	Improvement
	Darmstadt Road/Old Princeton Road	Signed Bike Route
	Baseline Road	Signed Bike Route
	Boonville New Harmony Road	Signed Bike Route
	Old State Road	Signed Bike Route
	Korff Road	Signed Bike Route
PHASE 2		
	North JR/HS Separated Path	Separated Multi-Use Path
PHASE 3		
	Boonville New Harmony Road	Signed Bike Route
	Peck Road	Signed Bike Route

PHASE 1

Phase 1 consists of all of the proposed routes that can easily be implemented. Placing bike route signs with informational and directional plaques along the roadway is all that will be required to implement the routes within Phase 1.

PHASE 2

Phase 2 consists of developing the multi-use path that connects with North Junior High and High Schools with Kingsmont Subdivision and Scott Elementary School. This path is important as it will provide safe access for children, as well as provide a recreational trail for surrounding residents.

PHASE 3

Phase 3 includes the two routes that are designated on the proposed network as future routes. Roadway improvements should be made to these routes before it is safe for a bicycling facility. These routes are still included as a part of the network because of connectivity to the other routes and destinations.

3. FUNDING

Although funds for infrastructure improvements are limited at this time, it is still possible to make real progress in improving conditions for bicycling and pedestrian facilities. Vanderburgh County should focus on including bikeway projects in the course of routine maintenance projects (i.e. striping bike lanes or wide curb lanes when roads are resurfaced) and road improvement projects (i.e. adding wide curb lanes or paved shoulders in new roadway or

reconstruction projects). In this way, bicycle and pedestrian improvements can be made in the course of regular development and maintenance, and funds can be used more effectively.

A range of local funding sources can be utilized for bicycling-related improvements. They include:

- General revenues
- General transportation funds
- Annual street and highway improvements
- Capital improvement projects budget requests
- Developer contributions
- Designated bond funds

Two other potential sources of funding for Vanderburgh County include TIF Funds and Riverboat Funds. TIF Districts were created as a funding source for improvements for local jurisdictions. The Districts use future gains in taxes to fund current improvements. The improvements made are expected to increase real estate values, then draw more people and businesses to that area which will generate additional tax revenue. Riverboat Funds, depending on the cost and type of project, could also be a source of funding for bicycle and pedestrian improvements. If federal funds are used, these local funds can be used as the local match.

The federal government's Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) provides a major opportunity for the region to fund strategic parts of its proposed bicycle and pedestrian plan. All of these funds require some contribution of local funds, typically 20 percent of the project's total cost. The Evansville Metropolitan Planning Organization is available to assist with these funds.

- Surface Transportation Program (STP) – STP funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as brochures, public service announcements, and route maps) related to safe bicycling and walking.
- Transportation Enhancements (TE) – Ten percent of each state's annual STP funds are used for Transportation Enhancements, which include the provision of facilities, and safety and educational activities for bicyclists and pedestrians. Most of the Pigeon Creek Greenway project has been funded with Transportation Enhancement funding.
- Safe Routes to School (SRTS) - This Program makes funding available for a wide variety of programs and projects, from building safer street crossings to establishing programs that encourage children and their parents to walk and bicycle safely to school.
- Congestion Mitigation and Air Quality (CMAQ) – CMAQ funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, bicycle racks, and non-construction projects (such as brochures, public service announcements, and route maps) related to safe bicycling and walking.
- Highway Safety Improvement Programs (HSIP) – As part of the HSIP, \$220 million is set aside each fiscal year for the Railway-Highway Crossings Program. These funds provide for the elimination of hazards and the installation of protective devices at public railway-highway crossings. Also as part of the HSIP, a new High Risk Rural Roads Program was established that provides funding for construction and operational improvements on rural major or minor collectors or rural local roads.
- Federal Transit Funding – Transit funds can be used for bicycle and pedestrian access to transit facilities, to provide shelters and parking facilities for bicycles in or around transit facilities, or to install racks or other equipment for transporting bicycles on transit vehicles.

Other non-transportation funding sources are also available, particularly for safety and education programs. For example, hospitals and bicycle retailers sometimes fund education efforts targeting child cyclists' use of bicycle helmets, and provide free or discounted helmets. In Indiana, the Governor's Council on Impaired and Dangerous Driving offers funds for qualified programs that improve cyclists and pedestrian safety.

While special grants are available to help fund the development of bicycle and pedestrian improvements, they cannot be used for routine maintenance or existing facilities. Annual maintenance includes street sweeping, street repair and restriping. Much of the maintenance cost is already covered by routine street maintenance work. However, communities interested in developing bikeway projects must address long-term funding for bikeway maintenance, and dedicate bicycle funding as a regular component of its general and capital funds.

